



MSIAC

2008 PEO/PM Symposium

Modeling and Simulation Information Analysis Center

Dane Mullenix, Director
Alion Science and Technology
dmullenix@alionscience.com
(703) 933-3375

Approved for Public Release
U.S. Government Work (17 USC § 105)
Not copyrighted in the U.S.

Information for the Defense Community 

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE NOV 2008		2. REPORT TYPE N/A		3. DATES COVERED -	
4. TITLE AND SUBTITLE Modeling and Simulation Information Analysis Center				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Alion Science and Technology				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited					
13. SUPPLEMENTARY NOTES See also ADM202819. Acquisition and Life Cycle Management Symposium: Rapid Access to Technical Information Supporting Defense Acquisition held in Huntsville, Alabama on 18-19 November 2008, The original document contains color images.					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT SAR	18. NUMBER OF PAGES 21	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			



MSIAC's Core Focuses

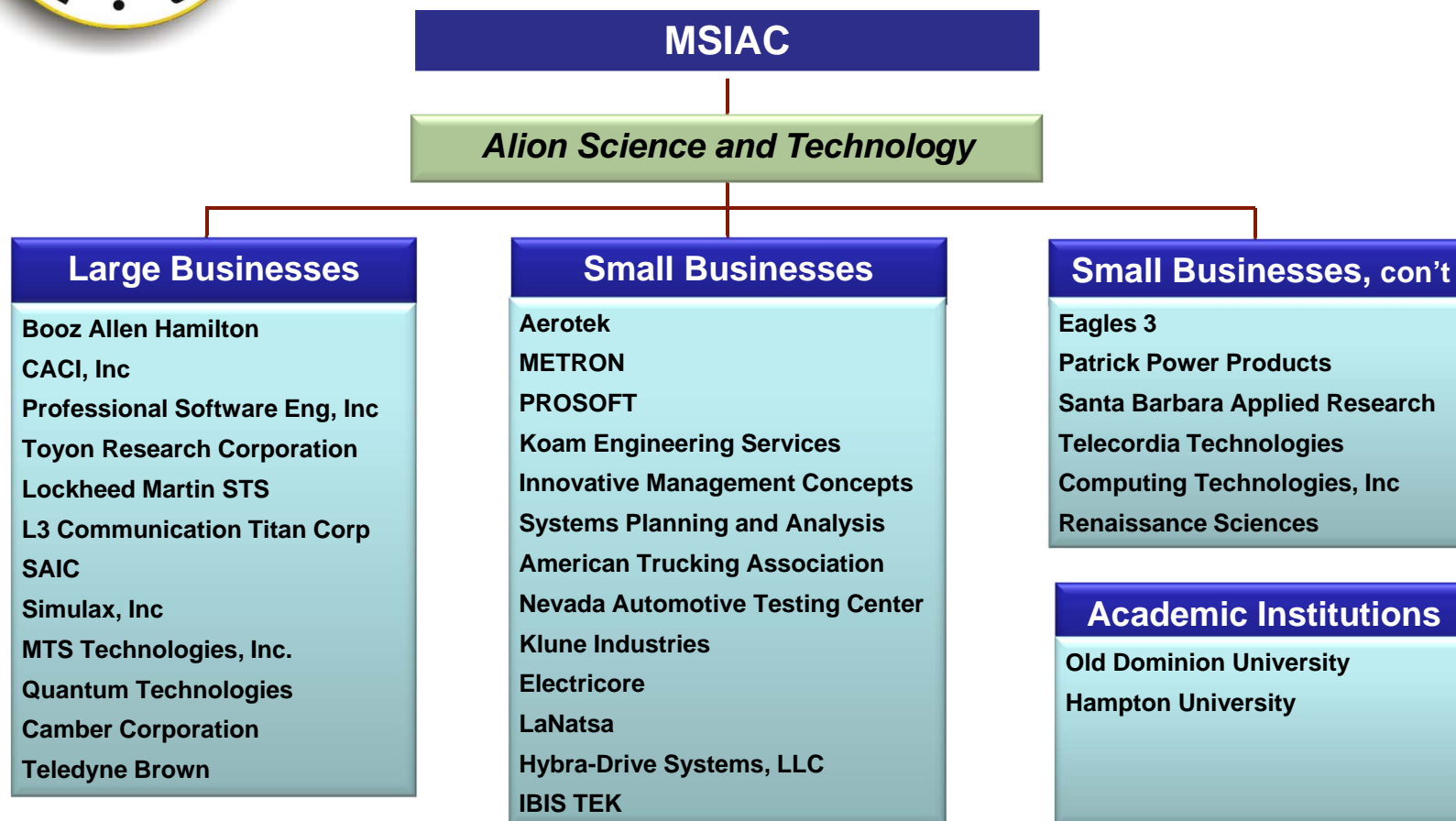
Modeling and Simulation for:

1. Life Cycle Management
 - Design review/optimization
 - M&S for re-engineering
2. Sustainment Technologies
 - Provisioning analysis
 - Lifecycle cost trades
3. Acquisition Support
 - Manufacturing analysis
 - Production design
 - Manufacturing Readiness Review
4. System Engineering
 - Analysis of Alternatives
 - Requirements Allocation Review
5. Manufacturing Technologies
 - Design, Prototype & Process Optimization
6. Testing
 - Design & Execution
 - First Article Testing
 - Materials Through System Levels
7. Materials Engineering
 - Materials Selection, Failure Analysis & Technology Insertion
 - Blast and shock / vibration modeling

MSIAC is a full life cycle solutions provider



THE MSIAC TEAM



MSIAC's technically diverse and multi-faceted team spans all stages of the system life cycle in providing support to the Warfighter.



MSIAC

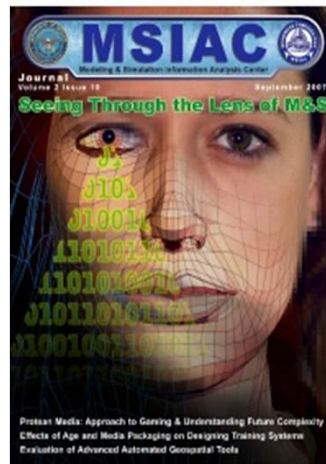
INFORMATION SERVICES



MSIAC Web Services

Goals

- Promote M&S through practices and products that increase visibility and connectivity within the M&S community
- Encourage confidence, collaboration and strengthened professional relationships
- Promulgate DoD M&S Policy and Vision through flagship events, educational opportunities, and collaborative activities



MSIAC Journal

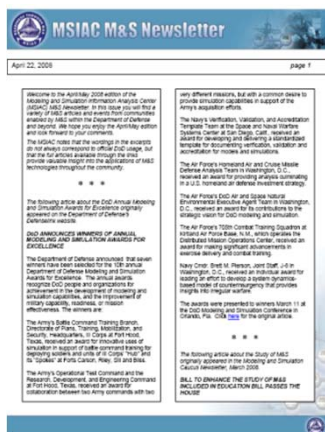
The following are near term events of interest to the Defense Modeling and Simulation Community.

Event	Date	Location
Tuesday, June 10, 2008	June 10, 2008	Fort Belvoir, MO
Tuesday, June 10, 2008	June 10, 2008	Fort Belvoir, MO
Tuesday, June 10, 2008	June 10, 2008	Fort Belvoir, MO
Monday, June 16, 2008	June 16, 2008	Fort Belvoir, MO
Monday, June 16, 2008	June 16, 2008	Fort Belvoir, MO
Tuesday, June 17, 2008	June 17, 2008	Fort Belvoir, MO
Wednesday, June 18, 2008	June 18, 2008	Fort Belvoir, MO
Wednesday, June 25, 2008	June 25, 2008	Fort Belvoir, MO
Monday, July 14, 2008	July 14, 2008	Fort Belvoir, MO
Monday, August 25, 2008	August 25, 2008	Fort Belvoir, MO

M&S Calendar

Products and Services

- MSIAC Journal
- MSIAC Newsletter
- MSIAC Website
- M&S Calendar
- Video Production
- Flagship Events



M&S Newsletter



M&S Leadership Video Interviews

Information for the Defense Community





MSIAC Education Program

- **Mission:** Improved Readiness through M&S Education; meeting the needs of the Warfighter
- **Objective:** Improved efficiency and effectiveness of military organizations through the use of M&S



- Over 13,000 students since 1997
- 1,350 presentations, 140 locations
- Workshops, courses, tutorials
- Tailored to the host
- Beginners to experts
- Worldwide delivery
- Courseware for four DL courses (DoD and Army)



Supporting the Warfighter

Through MSIAC's Help Desk Service

Get rapid, reliable answers to your technical questions from MSIAC!



Contact us directly!



- Phone: 888-566-7672
- Fax : 703-933-3325
- E-mail: MSIACHelpDesk@dod-msiac.org

- M&S Support to Distributed Technical Operations Center
- U.S. Coast Guard Campaign Model Support
- Irregular Warfare Study
- JTAMDO Capabilities Assessment for Air Defense Study



DoD M&S Resource Repository (MSRR)

- Established to promote discovery of M&S tools
- A cooperative effort across the DoD M&S community
 - enables sharing of resources
 - enhances reuse of government M&S tools
- Lists DoD and commercial tools
- 3500 Registered users
- Accessible through the MSIAC website



MSIAC

PROVIDING SOLUTIONS RELEVANT TO ACQUISITION

Examples of Contract Work



M&S for Acquisition

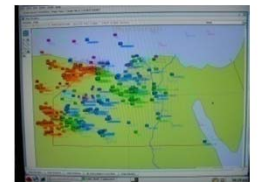
- The DoD M&S acquisition vision is to optimally employ responsive, trustworthy, and cost effective M&S capabilities to support defining, developing, testing, producing and sustaining America's capabilities that support the spectrum of DoD missions.
 - Foster widely-needed M&S capabilities beyond the reach of individual acquisition programs;
 - Better enable acquisition of effective joint capabilities and systems-of-systems; and
 - Empower program and capability managers by removing systemic M&S obstacles, identifying new options for approaching tasks, and helping support widely-shared needs.

(Extracted from the DoD Acquisition M&S Master Plan, April 2006)

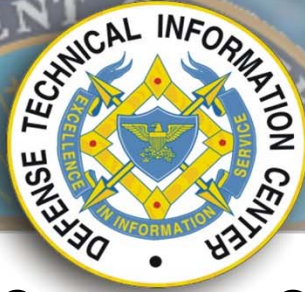


Joint Air Dominance & Persistent Strike Wargame

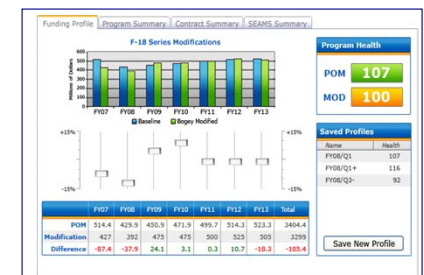
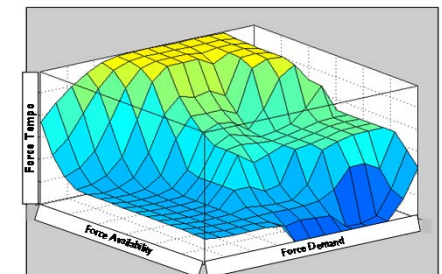
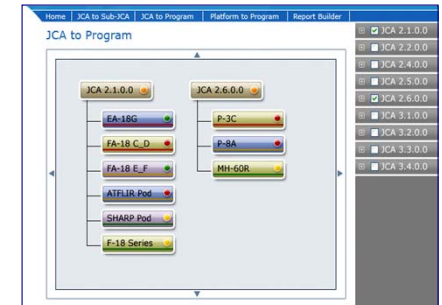
- Customer: OSD AT&L
- Objectives:
 - Provide subject-matter expertise to support a two wargame series to facilitate understanding and buy-in from senior DoD and Industry leaders
 - Wargame I established COCOM requirements and highlighted projected capability shortfalls
 - Wargame II challenged industry participants to help find solutions, including industrial base, production issues
 - Results highlighted potential solutions, fiscal constraints and risk mitigation strategies to both the capability gap and the ability of the defense industrial base to respond
- Accomplishments:
 - Produced significant insights applicable to future wargaming
 - Senior leaders “sold” on this approach for other mission area assessments
 - Future efforts to focus on Strategic Lift, C2/ISR and Bomber excursions



SmartMoves for Navy Warfare Integration



- Customer: OPNAV N8F Warfare Integration
- Objectives:
 - *SmartMoves* is an enterprise tool that addresses force mix and the associated investment strategy, providing:
 - Visual-based, user-friendly package focus on operational concepts and acquisition strategies
 - High-speed optimization routines that lead the user to a recommended solution space
 - In this tradespace the user can make adjustments to the POM and see the real-time impact on capability and force delivery schedules. Hands-on control allows the user to continuously adjust to evolving conditions.
- Accomplishments:
 - Customer gained earned value contribution from initial Subscription Account
 - Began development of a Programs-to-JCA Electronic Map and Integration of legacy system (PMDSS).





Stryker Vehicle

- Customer: US Army Tank Automotive Research Engineering Center (TARDEC)
- Objectives:
 - Redesign Land Warrior kits to support Operational Needs Statements requirements and integrate into the Forces Battle Command Brigade and Below (FBCB2) computers.
- Accomplishments:
 - Redesigned Land Warrior kits to support integration into FBCB2.
 - Effectively installed kits into Land Warrior gateway processor in accordance with Operational Needs Statement allowing for transition of project to prime contract General Dynamics.





III Corps Battle Command Training Branch Bringing it All Together Recipient 2008 DoD M&S Award

- Created technical assistance teams for simulation models/federations and Army Battle Command Systems (ABCS).
- Created mobile training teams for emerging ABCS and other BC systems.
- Added simulated, virtual unmanned aerial system feeds that replicates current military operations to collective training events.
- Added fiber to classrooms to improve training.
- Created integrated ABCS operator training classrooms with a suite of BC systems, a Battle Command Server (BCS) and simulated "live feed" to replicate real world Situational Awareness capabilities.
- Continued development of the Warrior Skills Trainer (WST - 2003 M&S Award recipient) to incorporate additional vehicle capabilities and a "shoot-back" capability.



Live Training



Virtual Training



Constructive Training



Operator Training



Logistics Readiness

- Customer: US Army Combined Arms Support Command (CASCOM)
- Objectives:
 - Develop methodology to enhance Overall Operational Capabilities of Army Logistical Units
- Accomplishments:
 - Reviewed and updated Tables of Organization and Equipment (TOE) for 63 Force Pool Units.
 - Developed methodology and received concurrence force all Force Development Directorates, the Architecture Integration and Management Division (AIMD) and Enterprise Systems Division.
 - Obtained approval of Commanding General, CASCOM, TRADOC and Army G4 personnel for new distribution methodology of the different types of Situational Awareness systems.





Navy/USCG VV&A Assistance

- Separate inquiries from Navy and USCG for VV&A assistance
- MSIAC coordinated combined Navy/USCG VV&A education class for over 20 people
- Both groups working acquisition initiatives
 - Navy: weapons acquisition
 - USCG: campaign models
- Coast Guard inquiry led to additional tasks





DoD/FAA UAV Inquiry

- MSIAC supported inquiry from USAF Simulation and Analysis Facility (SIMAF), WPAFB, OH
- Joint IPT looking at potential integration of UAVs in new National Airspace System (NAS)
- Joint IPT working closely with FAA





Iowa ANG M&S Technology Evaluation

- MSIAC working with Iowa Air National Guard/ DTOC to facilitate new technology acquisition program
- MSIAC SMEs conducted technology assessment and submitted recommendations
- DTOC accepted recommendations and will be able to continue high level of training success
- Initial inquiry has led to additional tasks based upon demonstrated expertise and performance





MSIAC Success Stories

Making Tools, Data, Services Visible & Accessible

- An M&S Help Desk answering acquisition M&S inquiries
- An M&S technical & operational support staff providing knowledge for acquisition M&S
- An M&S Repository (MSRR) for storing acquisition (and other) M&S resources
- A promoter of M&S through practices and products that:
 - increase visibility and connectivity within the M&S community
 - encourage confidence, collaboration and strengthened professional relationships

MSIAC is a source of M&S support for the entire acquisition community



Summary

- M&S is a national critical technology
- DoD is at the forefront of M&S technology development and application
- Successful acquisition is enabled by M&S, and the MSIAC is your one-stop shop for M&S advice, research and support



Q&A?

Dane Mullenix, Director
Alion Science and Technology
dmullenix@alionscience.com
(703) 933-3375